

Brooklyn Bridge New York, New York

Road Surface Replacement

Challenge

The ramps and approaches to the Brooklyn Bridge were being replaced with precast concrete slabs as part of a \$500 million rehabilitation. With more than 120,000 vehicles and 4,000 pedestrians crossing the structure every day, the project required a high-performance, quick-turnaround product in order to minimize the disruption of traffic flow.

Bridging The Gap With ProSpec®

Specifically designed to complement precast concrete slab placement, ProSpec® Slab Dowel Grout is highly fluid and has high early strength gain, both critical features for the strict time constraints of the job.

Solution

Construction on the Brooklyn Bridge was performed at non-peak hours – from 11 p.m. to 6 a.m. The road had to open for rush-hour traffic at 6 a.m., dictating the need for efficiency. To meet the time constraints, the Fort Miller Co. Inc. Super Slab System® and Slab Dowel Grout were used for the approach slabs to the Brooklyn Bridge.

Existing deck was removed by lifting out sections and replacing them panel by panel with the precast concrete-filled steel grid deck panels. The slabs were interlocked with adjacent panels using load transfer dowels. Thanks to its high fluidity, Slab Dowel Grout was then easily pumped into the inverted dovetail slots in the precast slabs.

Slab Dowel Grout sets quickly and with high early strength gain – reaching 2500 psi (17.24 MPa) in 2 hours. Due to its fast setting and hardening capabilities, the Slab Dowel Grout increased the reliability of the start and end times of construction activities every night.

Slab Dowel Grout has been used on numerous New York Department of Transportation projects and not only provides a rapid return to service but also has significant freeze/thaw resistance, making it an extremely durable product.

Products used: ProSpec® Slab Dowel Grout

Precast Concrete Slabs: Fort Miller Co. Inc. Super Slab System®

General Contractor: Skanska Koch

Subcontractor: Ferriera Contracting

